

REMARKS/ARGUMENTS

Status of Claims

Claims 1, 19, and 43 have been amended.

Claims 5-6, 10-18, 20-28, 30, 32, 35, and 40-42 have been canceled.

As such, claims 1-4, 7-9, 19, 29, 31, 33-34, 36-39, and 43 are currently pending in this application.

Applicants hereby request further examination and reconsideration of the presently claimed application.

Claim Rejections – 35 USC § 112

As amended, claims 1, 31, 36, and 43 stand rejected as indefinite for use of the term “less than about” because such term allegedly makes the presence of vinylidene or tri-substituted olefins be zero. Applicants respectfully disagree that there is anything indefinite about the term “less than about five weight percent vinylidene or tri-substituted olefins” as used in claims 5, 30, 31, and 36. Such limitation is clear on its face and conforms to standard practices in claiming products or compositions. In particular, such limitation is indicative of how much, if any, of unwanted byproducts are present in the product. Should the Examiner elect to maintain this rejection, Applicants respectfully request a more detailed explanation of why such language is indefinite and legal support for such a contention.

Claims 31 and 36 stand rejected as indefinite for defining the amounts of reactants and byproducts in a claim to a product that is made by a process. Applicants respectfully disagree that there is anything indefinite about defining a product of a process in terms of how much reactants and/or byproducts are in the product. Such limitations are clear on their face and conform to standard practices in claiming products or compositions. In particular, such limitations are

indicative of (i) how much, if any, of unwanted byproducts are present in the product and (ii) how much, if any, of unreacted starting materials are present in the product, each of (i) and (ii) providing an indication of the product purity, reaction yield, reaction conversion, etc. Should the Examiner elect to maintain this rejection, Applicants respectfully request a more detailed explanation of why such language is indefinite and legal support for such a contention.

Claim Rejections – 35 USC § 102

As amended, claims 1, 2, 8, 9, 19, 29, 31, 33, 34, 36, 38, 39, and 43 stand rejected under 35 USC § 102(b) as being anticipated by *Antonsen* (US Pat. 3,346,662). According to MPEP § 2131, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Applicants respectfully submit that *Antonsen* does not teach or suggest each and every element of the amended claims.

Applicants have amended claims 1 and 43 to recite a product comprising “less than about five weight percent vinylidene or tri-substituted olefins.” Such limitation was previously presented in dependent claim 30, which is now canceled. Applicants respectfully submit that independent claims 1, 31, 36, and 43 now each recite “less than about five weight percent vinylidene or tri-substituted olefins,” and such limitation is not taught or suggested by *Antonsen*.

The Examiner cites to three sections of *Antonsen* as disclosing the low amount of vinylidene recited in the pending claims. However, upon careful review, such sections of *Antonsen* do not in fact disclose the low amounts recited in the pending claims. First, the Examiner relies upon col. 1, lines 21-25 of *Antonsen* (emphasis added):

“The dimer fraction, which is separated from the reaction product, is composed mainly of the trans linear internal olefin along with minor amounts of other olefin types, particularly vinylidene.”

This text merely states that *Antonsen* teaches “minor amounts,” without providing any guidance as to what constitutes minor amounts. The term “minor” is a relative term, which without more is indefinite as to what constitutes a minor amount – a minor amount in comparison to what? Thus, the term “minor amount,” without more, does not teach or suggest “less than about five weight percent vinylidene or tri-substituted olefins.”

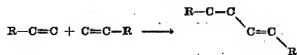
Second, the Examiner relies upon col. 3, lines 63-68 of *Antonsen*:

“At the proper reaction conditions generally 65-85% of the olefin charged can be converted to oligomers and 10-30% of the total oligomers is dimer product. The amount of linear trans olefin in the dimer product generally can vary between 50% and 85% depending largely upon which type of aluminum alkyl is used, ...”

This text relates to the conversion of olefin to oligomer and the amount of linear trans olefin in the dimer product. Notably, this text does not mention the presence or amount of vinylidene, and thus cannot be said to teach or suggest “less than about five weight percent vinylidene or tri-substituted olefins.”

Third, the Examiner relied upon col. 5, lines 55-67 of *Antonsen*:

“It is therefore surprising that the dimer product of the present process is mainly unbranched trans olefin. This type of structure apparently comes about through a head-to-head coupling reaction, illustrated as follows:



Infrared spectroscopy has shown that this linear trans structure constitutes the main component of the dimer product. Additionally the dimer contains a minor amount

(often 10-20%) of the vinylidene type of olefin and it also appears to contain a small percentage (e.g. <5%) of vinyl olefin ($R-C=C$)."

This text defines "minor amount" as meaning "often 10-20%." Once again, such text cannot be said to teach or suggest "less than about five weight percent vinylidene or tri-substituted olefins." Using the lowest amount of vinylidene mentioned in this passage, i.e., 10% vinylidene, Applicants have discovered and now claim a product having 50% less of an unwanted byproduct, which is a significant improvement over the art of record. Applicants respectfully submit that none of the passages from *Antonsen* relied upon by the Examiner, alone or in combination, teach or suggest a product having "less than about five weight percent vinylidene or tri-substituted olefins" as recited in the pending claims. Thus, Applicants respectfully submit that the pending claims are now in condition for allowance.

Claim Rejections – 35 USC § 103

Claims 3, 4, 7, and 37 stand rejected under 35 USC § 103(a) as obvious over *Antonsen*. Assuming for sake of argument that the modification of *Antonsen* is proper (and without conceding such), the Examiner has nonetheless failed to establish a *prima facie* case of obviousness as such a modification does not teach or suggest all of the claim limitations. Claims 3, 4, 7, and 37 each depend from and incorporate the limitations of the independent claims as discussed previously. As discussed previously, *Antonsen* does not disclose each and every element of the independent claims, and more specifically does not teach or suggest a product having "less than about five weight percent vinylidene or tri-substituted olefins." Thus, Applicants respectfully submit that claims 3, 4, 7, and 37 are likewise patentable over *Antonsen*.

CONCLUSION

Consideration of the foregoing amendments and remarks, reconsideration of the application, and withdrawal of the rejections and objections is respectfully requested by Applicants. No new matter is introduced by way of the amendment. It is believed that each ground of rejection raised in the Office Action dated June 23, 2006 has been fully addressed. If any fee is due as a result of the filing of this paper, please appropriately charge such fee to Deposit Account Number 50-1515 of Conley Rose, P.C., Texas. If a petition for extension of time is necessary in order for this paper to be deemed timely filed, please consider this a petition therefore.

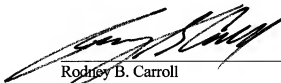
If a telephone conference would facilitate the resolution of any issue or expedite the prosecution of the application, the Examiner is invited to telephone the undersigned at the telephone number given below.

Respectfully submitted,

CONLEY ROSE, P.C.

Date: _____

9-25-06



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